

Claims

1. A solid oxide fuel cell comprising:  
a substrate;  
an electrolyte disposed on one surface of the substrate;  
and  
at least one electrode element comprising an anode and a cathode disposed on the same surface of the electrolyte and with a predetermined space therebetween.
2. The solid oxide fuel cell according to Claim 1, which further comprises  
another electrolyte disposed on the other surface of the substrate, and  
another electrode element comprising an anode and a cathode disposed with a predetermined space therebetween on the same surface of the electrolyte which is disposed on the other surface of the substrate.
3. The solid oxide fuel cell according to Claim 1 or 2, which comprises a plurality of such electrode elements.
4. The solid oxide fuel cell according to Claim 3, which furtherer comprises an interconnector for connecting the plurality of electrode elements.
5. The solid oxide fuel cell according to Claim 3 or 4, wherein a groove is formed in the electrolyte to partition between adjacent electrode elements.

6. The solid oxide fuel cell according to Claim 3 or 4, wherein the electrolyte is separated from the adjacent electrode elements.

7. The solid oxide fuel cell according to Claim 6, wherein an insulating material is disposed between adjacent electrolytes.

8. The solid oxide fuel cell according to any one of Claims 1 to 7, wherein the electrolyte is formed by printing.

9. The solid oxide fuel cell according to any one of Claims 1 to 7, wherein the electrolyte is formed into a plate-like shape, and the electrolyte is attached to the substrate by adhesive.

10. The solid oxide fuel cell according to Claim 5, wherein the groove cuts through the electrolyte and reaches the substrate.

11. The solid oxide fuel cell according to any one of Claims 1 to 10, wherein the electrode element is formed in such a manner that one of the electrodes is surrounded by another electrode with a predetermined space therebetween.

12. A solid oxide fuel cell comprising a plurality of single cells each having an electrolyte, an anode, and a cathode,  
the solid oxide fuel cell further comprising a

substrate for supporting the plurality of single cells;

the electrolyte of each single cell being disposed on the substrate with predetermined space therebetween.

13. The solid oxide fuel cell according to Claim 12, which further comprises an interconnector for connecting the plurality of single cells.

14. The solid oxide fuel cell according to Claim 12 or 13, wherein each electrolyte is formed by printing.

15. The solid oxide fuel cell according to Claim 12 or 13, wherein each electrolyte is formed into a plate-like shape, and each electrolyte is attached to the substrate by adhesive.

16. The solid oxide fuel cell according to any one of Claims 1 to 15, wherein the substrate is formed from a ceramic material.